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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/522,725	09/22/2005	Yuuichi Kanayama	1417-495	8472

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EXAMINER	
FRANK, NOAH S	

ART UNIT	PAPER NUMBER
1796	

MAIL DATE	DELIVERY MODE
04/15/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/522,725	KANAYAMA ET AL.	
	Examiner	Art Unit	
	NOAH FRANK	1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 February 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *32-54* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *32-54* is/are rejected.

7)☒ Claim(s) *43* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

Claim 43 objected to under 37 CFR 1.75 as being a substantial duplicate of claim 36. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k). For the purposes of examination, claims 43 has been understood to depend on claim 42.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 32-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsumoto et al. (JP 2000-256529) in view of Sliwinski et al. (US 6,454,848).

Considering Claims 32-37, 42-44, 49-53: Matsumoto et al. teaches a light-resistant rubber-reinforced styrenic resin composition comprising 100 parts by weight of a dienic rubber-reinforced styrenic resin and 4 to 20 parts by weight of a pigment (Abs). The resin is prepared by grafting styrene onto polybutadiene (Abs). Matsumoto teaches using 27 wt% of the rubber polymer (Abs).

Matsumoto does not teach the inorganic pigment being an oxide containing at least two elements selected from the group consisting of Fe, Cr, and Mn and having an infrared-reflecting property. However, Sliwinski et al. teaches inorganic pigments including a host component and guest component comprising one or more elements from the group consisting of aluminum boron, chrome, cobalt, iron, manganese, nickel, tin, and zinc (Abs). Solid solutions are formed by mixing metal oxides which contain the host and guest components (Abs). When multiple guest components are used, a representative ratio is 0.94:3.35:0.83 (5:40-45). Example 1 teaches a Cr/Fe pigment (5:40-45) and Example 8 teaches a Cr/Mn pigment (6:25-30). Sliwinski also teaches that one would reasonably expect that since iron and chrome have similar lattice constants, they would be interchangeable (4:20-35). Therefore, Sliwinski also teaches a Fe/Mn pigment. Matsumoto also teaches using 6 parts by weight of titanium oxide, a white (inorganic) pigment (Abs).

Matsumoto and Sliwinski are analogous art because they are concerned with the same technical difficulty, namely IR-reflective pigments. At the time of the invention a person of ordinary skill in the art would have found it obvious to have used the pigments, as taught by Sliwinski, in the invention of Matsumoto, to impart near infrared reflectance, resulting in lower heat build-up (2:55-60 of Sliwinski).

Matsumoto does not teach the claimed temperature rise. While all of the claimed effects or physical properties are not positively stated by the reference(s), the references, when taken together, teaches all of the claimed ingredients. Therefore, the

claimed effects and physical properties, i.e. a temperature rise of not less than 50°C would implicitly be achieved by a composite with all the claimed ingredients.

Matsumoto does not teach the claimed L values of the pigments. While all of the claimed effects or physical properties are not positively stated by the reference(s), the references, when taken together, teaches all of the claimed ingredients. Therefore, the claimed effects and physical properties, i.e. an L value of less than 40 would implicitly be achieved by a composite with all the claimed ingredients.

Matsumoto does not teach the claimed L value of the molded product. While all of the claimed effects or physical properties are not positively stated by the reference(s), the references, when taken together, teaches all of the claimed ingredients. Therefore, the claimed effects and physical properties, i.e. an L value of not more than 40 and maximum reflectance of not less than 15% would implicitly be achieved by a composite with all the claimed ingredients.

Considering Claims 38-39, 45-46: Matsumoto does not teach the inorganic pigment [C] being a green-based pigment and a white and blue-based pigment. However, it is submitted that changing pigment colors is common practice. At the time of the invention a person of ordinary skill in the art would have found it obvious to have used green or white and blue-based pigments, to impart color to the final product.

Considering Claims 40, 47: Matsumoto does not teach the claimed maximum reflectance. While all of the claimed effects or physical properties are not positively stated by the reference(s), the references, when taken together, teaches all of the claimed ingredients. Therefore, the claimed effects and physical properties, i.e. a

maximum reflectance of not less than 15% would implicitly be achieved by a composite with all the claimed ingredients.

Comment [NSF1]: A composition is what it is, not what properties it has. If the composition is the same, then the properties have to be the same.

Considering Claims 41, 48 54: Matsumoto teaches the composition useful as a molding material (Abs).

Response to Arguments

Applicant's arguments filed 2/19/09 have been fully considered but they are not persuasive.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). In the instant case, both references deal with IR refractive pigments, and Sliwinski gives motivation to include these pigments into polymers (2:50-60). Furthremore, the knowledge was within the level of ordinary skill at the time the claimed invention was made.

In response to applicant's arguments that Matsumoto does not teach the pigments being IR refractive, while Matsumoto does not state that they are IR refractive, the pigments do have IR refractive qualities. For example, Matsumoto teaches using

chrome oxide (¶0021), which, according to the charts in Sliwinski, contains an IR refractive quality. Furthermore, from the charts, it is clear that Sliwinski's pigments contain better IR refractive properties, which would lead the skilled artisan to choose those pigments over those taught in Matsumoto, in order to lower heat build-up in the final product (2:55-57 of Sliwinski).

In response to applicant's arguments that the claimed effects and physical properties would not be implicitly achieved, a chemical composition and its properties are inseparable. MPEP 2112.01. While it has been shown in the comparative examples that the amount of pigment can have an effect on the temperature rise and L value, the amount of pigment has not been claimed, and it can be assumed that given the claimed composition, all possible variants within the claimed limitations would arrive at the claimed properties. Additionally, as both temperature rise and L value vary given the amount of pigment, the experimental modification of this prior art in order to ascertain optimum operating conditions fails to render applicants' claims patentable in the absence of unexpected results. MPEP 2144.05. Modifying the amount of pigment will allow the skilled artisan to tailor the invention to the particular desired function and aesthetics, thus arriving at the claimed L value and temperature rise.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NOAH FRANK whose telephone number is (571)270-3667. The examiner can normally be reached on M-F 9-5 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Eashoo can be reached on 571-272-1197. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

NF
4-6-09

/Harold Y Pyon/
Supervisory Patent Examiner, Art Unit 1796